

**IN THE UNITED STATES  
PATENT AND TRADEMARK OFFICE**

Appl. No. : **10/501,169**  
Applicant(s) : **De ZWART et al.**  
Filed : **7/12/2004**  
TC/A.U. : **2879**  
Examiner : **DONG, Dalei**  
Atty. Docket : **NL-020016**

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Title: **LIGHT EMITTING DISPLAY DEVICE WITH MECHANICAL PIXEL SWITCH**

**AMENDMENT and/or RESPONSE after FINAL ACTION**

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Sir:

In response to the final Office action of 10 July 2006, please amend the above referenced application as follows and/or reconsider the application in light of the following remarks. This paper is being filed within two months of the mailing of the final Office action.

**This paper includes (each beginning on a separate sheet):**

- 1. Amendments to and/or listing of the claims;**
- 2. Remarks / Discussion of issues.**

**Amendments to the Claims:**

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (Previously presented) A display device comprising  
a first and a second set of electrodes,  
a plurality of light-emitting elements arranged between the sets of electrodes and being in electrical contact with the first set of electrodes, and  
an electromechanically operable foil having at least one electrically conducting side that is substantially unpatterned,  
the foil being located between the light-emitting elements and the second set of electrodes, with the conducting side facing the light-emitting elements, and  
the foil being arranged to place the conducting side in contact with selected ones of the light-emitting elements, thereby closing a circuit from the first set of electrodes, via the light-emitting elements, to the conducting side.
2. (Previously presented) The display device of claim 1, wherein the foil is made of an electrically conducting material.
3. (Previously presented) The display device of claim 1, wherein the foil has one side coated with an electrically conducting layer.
4. (Previously presented) The display device of claim 1, wherein the foil is displaceable towards electrically activated electrodes in the second set of electrodes, thereby moving the conducting side away from the light-emitting elements.

5. (Previously presented) The display device of claim 1, wherein the foil is displaceable towards electrically activated electrodes in the first set of electrodes, thereby forcing the conducting side against the light-emitting elements.

6. (Previously presented) The display device of claim 1, wherein the foil is arranged to be forced against the light-emitting elements except when attracted towards electrically activated electrodes in the second set of electrodes.

7. (Previously presented) The display device of claim 1, wherein the first set of electrodes comprises a first plurality of parallel strip electrodes, and the second set of electrodes comprises a second plurality of parallel strip electrodes, in orthogonal relationship with the first plurality of electrodes, so that the sets of electrodes form a grid of intersecting electrodes, and wherein the light-emitting elements are located at intersections of electrodes.

8. (Previously presented) The display device of claim 1, wherein the conducting side is connected to ground.

9. (Previously presented) The display device of claim 1, wherein the light-emitting elements are organic electroluminescent devices.

10. (Previously presented) The display device of claim 1, wherein the light-emitting elements are non-organic LEDs.

11. (Previously presented) A display device comprising:
- a plurality of first electrodes,
  - a plurality of second electrodes,
  - a plurality of light emitting elements that are operably coupled to the plurality of first electrodes, and
  - a foil that includes an electrically conductive layer that is configured to provide selective contact to select elements of the plurality of light emitting elements,
- wherein
- the selective contact is determined based on a potential difference between the foil and select electrodes of the plurality of second electrodes.
12. (Previously presented) The display device of claim 11, wherein
- the light emitting elements include organic electroluminescent devices.
13. (Previously presented) The display device of claim 11, wherein
- the light emitting elements include light emitting diodes.
14. (Currently amended) ~~The display device of claim 11, wherein~~ A display device comprising:
- a plurality of first electrodes,
  - a plurality of second electrodes,
  - a plurality of light emitting elements that are operably coupled to the plurality of first electrodes, and
  - a foil that includes an electrically conductive layer that is configured to provide selective contact to select elements of the plurality of light emitting elements,
- wherein
- the selective contact is determined based on a potential difference between the foil and select electrodes of the plurality of second electrodes, and
- the foil is configured to be in contact with the light emitting elements in the absence of a potential difference between the conductive layer of the foil and the plurality of first electrodes.

15. (Previously presented) The display device of claim 11, wherein  
the second electrodes correspond to row select electrodes, and  
the first electrodes correspond to data electrodes.
16. (Previously presented) The display device of claim 15, wherein  
the data electrodes are driven by pulse-width modulated signals.
17. (Previously presented) The display device of claim 11, wherein  
the conductive layer of the foil is maintained at a substantially constant  
potential.
18. (Previously presented) The display device of claim 11, wherein  
the plurality of first electrodes are arranged substantially orthogonal to the  
plurality of second electrodes.
19. (Previously presented) The display device of claim 11, wherein  
the foil is substantially unpatterned.
20. (Previously presented) The display device of claim 11, wherein  
the foil includes an evaporable polymer.

REMARKS / DISCUSSION OF ISSUES

Claims 1-20 are pending in the application.

Claim 14 is amended to place it in condition for allowance. The Office action indicates that claim 14 would be allowable if rewritten in independent form including all of the limitations of its base claim and any intervening claims; claim 14 is correspondingly amended herein. Claim 14 is not narrowed in scope and no new matter is added. Entry after final action is proper because the scope of the claims is not changed and no further searching is required.

The Office action rejects claims 11-13, 15-18, and 20 under 35 U.S.C. 102(e) over Ma et al. (USP 6,677,709, hereinafter Ma). The applicants respectfully traverse this rejection.

MPEP 2131 states:

"A claim is anticipated only if **each and every element** as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The **identical invention** must be shown in as **complete detail** as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Claim 11, upon which each of the other rejected claims depends, claims a display device that includes light emitting elements that are operably coupled to first electrodes, and a foil with an electrically conductive layer that is configured to provide selective contact to select light emitting elements based on a potential difference between the foil and select electrodes of second electrodes.

Ma fails to teach a foil with a conductive layer that is configured to provide selective contact to select light emitting elements based on a potential difference between the foil and select electrodes of second electrodes.

The Office action does not show that Ma teaches a foil with a conductive layer that is configured to provide selective contact to select light emitting elements based on a potential difference between the foil and select electrodes of second electrodes.

Instead, the Office action asserts that the claimed configuration of the foil is a functional recitation that does not distinguish the structure of Ma from the applicants' claimed structure. The applicants respectfully disagree with this assertion.

The applicants respectfully maintain that the arrangement of the foil such that contact can be effected based on a potential difference between the foil and a second electrode is a structural limitation, and this structural limitation is not taught by Ma. The structure of Ma's device precludes providing contact based on a potential difference between the foil and second electrodes. Ma's structure includes the second electrodes on the same foil as the conductive layer that provides contact with the light emitting elements and thereby makes the selection of the contact with the light emitting elements independent of the potential between the foil and the second electrodes.

The Office action references MPEP 2114 for justifying this rejection based on structural vs. functional language limitations. The applicants respectfully note that the distinction noted in MPEP 2114 relates to attempting to claim different functions that can be performed by the same structure. As noted in MPEP 2114: "The absence of a disclosure in a prior art reference relating to function did not defeat the Board's finding of anticipation of claimed apparatus ***because the limitations at issue were found to be inherent in the prior art reference***" (emphasis added). Assuming in argument that claim 11 recites a limitation to the structure that relates to a functional limitation, the claimed functional limitation is not inherent in Ma, because Ma's structure cannot effect the claimed functional limitation.

Because Ma's structure is substantially different from the applicants' claimed structure, in that Ma's structure cannot effect selective pixel activation based on a potential difference between two other structural elements, as specifically claimed in claim 11, the applicants respectfully maintain that the rejection of claims 11-13, 15-18, and 20 under 35 U.S.C. 102(e) over Ma is unwarranted, per MPEP 2131 and MPEP 2114.

In view of the foregoing, the applicants respectfully request that the Examiner withdraw the objection(s) and/or rejection(s) of record, allow all the pending claims, and find the application to be in condition for allowance. If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Robert M. McDermott", written over a horizontal line.

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